REQUEST FOR ADDITIONAL INFORMATION

BULLETIN 2002-02

1. In Entergy's 30-day response to NRC Bulletin 2002-02 for Arkansas Nuclear One, Unit 1, on page 3 of 5, the scope of the reactor pressure vessel (RPV) head inspections for refueling outage 1R17 is described. The inspection scope is limited to bare metal visual examination of the RPV head and volumetric examination of 68 of 69 the RPV head penetrations. As a result of recent inspection findings at North Anna, Unit 2, the NRC has concerns about the combination of non-destructive examinations and the inspection scope of the RPV head during refueling outage 1R17. The concern is that through-weld cracks in the J-groove welds may provide the conditions that could lead to circumferential cracking in the nozzle base material at or above the J-groove weld with no visual indications of leakage deposits on the RPV head.

   The licensee for North Anna, Unit 2, has identified circumferential cracks in nozzles examined with ultrasonic testing and indications were identified on the J-groove weld for a high percentage of the penetrations. According to the licensee for North Anna, Unit 2, there were no visual indications of boric acid deposits on the surface of the RPV head at all of these nozzles. This finding, if verified, indicates that cracks in the J-groove welds may provide the conditions that could lead to circumferential cracking in the nozzle base material at or above the J-groove weld with no visual indications of leakage deposits on the surface of the RPV head.

   Considering the discussion above, please supplement your Bulletin 2002-02 response with a discussion of whether the findings at North Anna, Unit 2, alters your decision to not directly examine the J-groove welds of all of the 69 nozzles.

2. In Entergy's 30-day response to NRC Bulletin 2002-02 for Arkansas Nuclear One, Unit 1, on page 3 of 5, it is stated that volumetric examination of nozzle 1 may be performed if the visual inspection of the nozzle is inconclusive. In the bulletin response, it is explained that the basis for excluding nozzle 1 from the scope of the volumetric examination is that a RADCAL instrument would have to be removed, but a technical/safety basis is not provided.

   The staff acknowledges discussions held during the meeting on October 16, 2002, and follow-up discussions on October 17 and 18, 2002. Information you provided during those discussions does not provide sufficient technical justification to exclude nozzle 1 from volumetric examination.

   What is the technical/safety basis for excluding nozzle 1 from the scope of the volumetric examination? Specifically, what is the technical justification that nozzle 1 does not have a circumferential crack which may lead to nozzle ejection?